















Federal Funding for High End Computing (HEC) Birds Of a Feather

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National Institute of Standards and Technology

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Some HEC work going on at NIST in the Mathematical and Computational Sciences Division

Parallel Adaptive Multigrid: http://math.nist.gov/phaml/

Java Numerics: http://math.nist.gov/javanumerics/

Screen Saver Science: http://math.nist.gov/mcsd/savg/parallel/screen/

Modeling Fluid Flow in Complex Geometries with Parallel Lattice Boltzmann:

http://math.nist.gov/mcsd/savg/parallel/lb/

Modeling High Performance Concrete with Parallel Dissipative Dynamics:

http://math.nist.gov/mcsd/savg/parallel/dpd/

Interoperable MPI: http://impi.nist.gov/

MPI Data Structures: http://math.nist.gov/mcsd/savg/auto/

Computation of Atomic Properties with the Parallel Hy-CI Method:

http://math.nist.gov/mcsd/savg/parallel/atomic/

Nanostructure Modeling: http://math.nist.gov/mcsd/savg/parallel/nano/

Computation of X-Ray Absorption with Parallel Feff: http://math.nist.gov/mcsd/savg/parallel/xray/

Dielectric Breakdown: http://math.nist.gov/mcsd/savg/parallel/dielectric/

Modeling Dendritic Growth in Metallic Alloys with the Parallel Phase Field Method:

http://math.nist.gov/mcsd/savg/parallel/pfm/

Immersive Scientific Visualization: http://math.nist.gov/mcsd/savg/vis/

Parallel Genetic Programming: http://math.nist.gov/mcsd/savg/datamine/geneticprogramming/

Others...



NIST Funding is though the Advanced Technology Program (ATP)

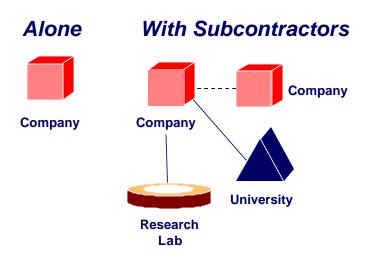
ATP Mission:

To accelerate the development of innovative technologies for broad national benefit through partnerships with the private sector

ATP

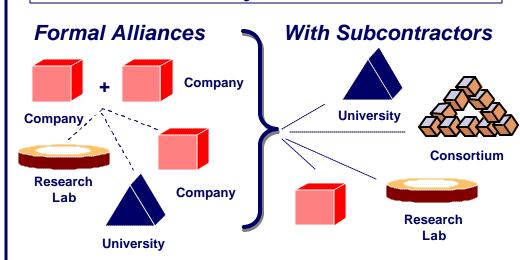
- ATP is open to companies of all sizes
- ATP funding is available to all technologies
- ATP requires cost-sharing commitment to commercialization

As a Single Company:



- For-profit company
- 3-year time limit
- \$2M award cap
- Company pays indirect costs
- Large companies cost share at least 60% of total project cost

As a Joint Venture:



- At least 2 for-profit companies
- 5-year time limit
- No limit on award amount (other than availability of funds)
- Industry share >50% total cost
- ATP encourages teaming arrangements
- ☐ Most projects involve alliances

ATP: Two Major Criteria

- Scientific and Technological Merit (50%)
 - Technical Rationale
 - ✓ high technical risk & feasibility
 - ✓ technological innovation
 - R&D Plan
- Potential for Broad-Based Economic Benefits (50%)
 - National Economic Benefits
 - Need for ATP Funding
 - Pathway to Economic Benefits

For Info on ATP and to Join the ATP Mailing List . . .

• Call toll-free:

800-ATP-FUND

(800-287-3863)

Fax your name and

address to:

301-926-9524

• Send e-mail to:

atp@nist.gov

• Visit ATP's website:

www.atp.nist.gov